APHIDIDAE OF MANCHOUKUO WITH THE DESCRIPTION OF TWO NEW SPECIES.

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So faras we know there has been no literature treating the Aphididae of Manchoukuo. The present work is the result of an attempt to enumerate the aphids fauna of Kinshu, a northern part of Manchoukuo. So it may well be called a faunal study of Manchoukuo in general. In the present work the senior author is responsible for the determination of the known forms and also for the description of new species. The junior author has done on the other hand the tedious work of collecting and shipping of the specimen to the senior author. In this report 46 species are recorded, two of which being new to science.

FAMILY APHIDIDAE

SUBFAMILY LACHNINAE

TRIBE *CINARINI*

1. *Cinara thujafoliae* THEOBALD (Nezuko-ohabura)

Original description — *Lachniella thujafoliae* THEOBALD, Bull. Ent. Research., Vol. IV, p. 335 (1915).

Rept. in Japan — *Lachnus thujafoliae* TAKAHASHI, Aphididae of Formosa, 11, p. 81 (1921).

Date of collection — June I, 1937 at Kinshu.

TRIBE *LACNINI*

2. *Tuberolachnus saligna* GMELIN (Yanagi-kobuohabura)

Orig. descr. — *Aphis saligna* GMELIN, Syst. Nat., p. 2209, no. 62 (1788)

Rept. from Orient DAS, Mem. Ind. Mus, VI., p. 257 (1918); TAKAHASHI, Aphid. Formosa, 1, p. 82 (1921); *Pterochlorus viminalis* SHINJI, Bull. XI, Morioka Coll. Agri. et Forest., XI, p. 8. (1927); *Pterolachnus viminalis* NEVSKY, Mon. Aphid. Middle Asia, p. 351 (1929): TAKAHASHI, List (1918).

Host — *Salix* spp.

Collection — June 9, 1937 at the outside of the West Gate.

Distribution — Europe, America, Africa, India, Middle Asia, Japan, Korea, Formosa, China, Manchoukuo.

SUBTRIBE *PTEROCHLORINA*

3. *Pterochlorus tropicalis* van der GOOT (Nettai-kurobaneohabura)

Orig. descr. — *Pterochlorus tropicalis* van der Goot, Rec. Ind. Mus., XII, pt. I, p. 3 (1916). Desc. from orient.—*Pterochlorus japonica* Matsumura, Jour. Coll. Agri. Tohoko Imp. Univ., VII, pt. 6, p. 378 (1917); *Pterochlorus tropicalis* Shinji, Bull. Morioka Coll. Agri. and Forest., XI, p. 7 (1927).

Collected — on *Quercus* sp. at Kinshu.

Distr. — Sagaline, Japan, Korea, China, Java, Manchoukuo.

TRIBE *CALLIPTERINI*

SUBTRIBE *CALLIPTERINA*

4. *Myzocallis nirecola* SHINJI (Keyaki-higemadaraabura)

Orig. desc. — *Lutaphis nirecola* Shinji, Jour. Zool., XXXIV., p. 347 (1924).
Descr. — from Orient — Shinji, Stud. Aphid., p. 320 (1937).
Hosts — *Ulmus*, *Zelkoa* sp.
Collected — June 23, 1936 at Kinshu.
Gen. distr. — Japan, Manchoukuo.

5. *Tuberculoides capitata* ESSIG and KUWANA (Kunugi-togemadaraabura)

Orig. desc. — *Myzocallis capitata* Essig and Kuwana ,Proc. Cal. Acad. Sci., ser., 3, pt. 6, p. 89 (1918).

Syn. — *Tuberculoides capitata* Shinji, Stud. Aphid., p. 356 (1937).
Host — *Quercus serrata.*
Collected — June 16, 1937 at Kinshu.
Distr. — Japan Proper, Korea, Manchoukuo.

6. *Sappocallis ulmicola* MATSUMURA (Akadamo-sapporomadaraabura)

Orig. descr. — *Sappocallis ulmicola* Matsumura, Trans. Sapporo Nat. Hist. Soc., VII, pt. 2, p. 108 (1919); Shinji, Stud. Aphid., p. 347 (1937).

Host — *Ulmus* sp.
Distr. — Japan, Korea, Manchoukuo.

7. *Therioaphis ononidis* KALTENBACH (America-hanemadaraabura).

Orig. descr. — *Aphis ononidis* Kaltenbach, Ent. Zeit., III, p. 173 (1847).
Desc. from Orient — Shinji, Stud. Aphid., p. 372 (1937).
Host — Alfalfa, *Trifolium* spp..
Collected — May 30, 1937 at Kinshu.
Distr. — Europe, N. America, India, Japan. Korea, Manchoukuo.

SUBTRIBE *CHAITOPHORINA*

8. *Periphyllus testudinatus* THORNTON (Kuro-nitaikeabura)

Orig. descr.—*Aphis testudinatus* THORNTON, Trans. Mic. Soc. London, III, (1852).

Descr. from Orient—*Chaitophorus salijaponica* ESSIG and KUWANA, Proc. Cal. Acad. Sci., 4th ser., VIII, no. 3, p. 84 (1918); *Periphyllus testudinatus* SHINJI, Stud. Aphid., p. 430 (1937).

Host—*Acer* sp.

Collected—May 20, 1937 at Kinshu.

Distr.—Europe, N. America, Japan, Manchoukuo.

SUBTRIBE *PTEROCOMMINA*

9. *Melanoxantherium salijaponica* SHINJI (Yanagi-shiroharakeabura)

Orig. descr.—*Melanothanthus salijaponica* SHINJI, Jour. Zool., XXXVI, p. 348 (1924).

Descr. from Orient—*Melanoxantherium yezoensis* HORI, Trans. Sapporo Nat. Hist. Soc., X, pt. 2, p. 109 (1929); *Melanoxantherium coreanum* OKAMOTO and TAKAHASHI, Insecta Matsumura, I, no. 3, 140 (1927); *Melanoxantherium salijaponica* SHINJI, Stud. Aphid., p. 437 (1937).

Host—*Salix* spp.

Collected—June 9, 1937 at the outside of the East Gate, Kinshu.

Gener. Dist.—Japan, Korea, Manchoukuo.

TRIBE *APHIDINI*

SUBTRIBE *APHIDINA*.

10. *Anuraphis kochi* SCHOUTEDEN (Koch-omaruabura)

Orig. descr.—*Aphis pyri* KOCH, Planzenläuse, p. 60 (1857); *Aphis kochi* SHOUTEDEN, Ann. Soc. Ent Belg., XLVII, p. 185 (1906).

Desc. from Orient—*Anuraphis kochi* SHINJI, Jour. Appl. Zool., IV, no. 3, p. 2 (1932); SHINJI, Stud. Aphid., p. 477 (1937).

Host—*Pirus sinensis.*

Coll.—May 30, 1937 at Kinshu.

Gener. distr.—Europe, Japan, Manchoukuo.

11. *Anuraphis piricola* OKAMOTO and TAKAHASHI (Nashi-omaruabura)

Orig. descr.—*Sappaphis pyri* MATSUMURA, Trans. Sapporo Nat. Hist. Soc., VII, p. 18 (1918); *Anuraphis piricola* OKAMOTO and TAKAHASHI, Insecta Matsumurana, I, p. 139 (1927).

Descr. from Orien —*Anuraphis piricola* HORI, Hokkaido Agr. Expt. St.

Rept., no. 23, p. 149 (1929); Shinji, Stud. Aphid., p. 480 (1937).

Host — *Pirus sinensis.*

Collected — among the lot labelled " Anuraphis kochi ? "

Gener. distr. — Japan, Korea, Manchoukuo.

12. *Anuraphis pruni* SHINJI (Anzu-omaruabura)

Orig. descr. — *Aphis pruni* Shinji, Jour. Zool., XXXIV, p. 708 (1922); *Anuraphis mumecola* Shinji, Lansania, II, no. 20, p. 156 (1930).

Host. — *Prunus mume.*

Collected — May 3, 1936 at Kinshu.

Gener. distr.—Japan, Korea, Manchoukuo.

13. *Aphis glycines* MATSUMURA (Daizu-abura)

Orig. descr. — Matsumura, Jour. Coll. Agri. Tohoku Imp. Univ., VII, pt. 6, p. 387 (1917).

Descr. from Orient — *Aphis glycines* Hori, Hokkaido Agri. Expt. St. Rept., no. 23, p. 107 (1927); Shinji, Stud. Aphid., p. 504 (1937)

Host — Soy bean (*Glycine soja*).

Colledcted — July 7, 1937 at Kinshu.

Gener. distr. — Japan, Manchoukuo.

14. *Aphis gossypii* GLOVER (Wata-abura)

Orig. descr. — Glover, Rept. Comm. Agri. U. S. A., 1879, p. 36 (1877).

Syns. — *Aphis malvae* Koch, Die Planzenläuse, p., 125 (1857); Takahashi, Aphid. Formosa, pt. I, p. 46 (1921); *Aphis tectonae* van der Goot, Fauna Ind. Neerl, I, p. 3 (1917); *Aphis shirakii* Takahashi, Aphid. Formosa, pt. I, p. 58 (1921); *Aphis clerodendri* Matsumura, Jour. Coll. Agri. Sapporo, VII, p. 385 (1917); *Aphis colocasiae* Matsumura, loc. cit., p. 386 (1918); *Aphis vitiforiae* Shinji. Jour. Zool., XXXIV, p. 800 (1922); *Aphish ibiscifoliae* Shinji, loc. cit., p. 796; *Aphis inugomae* Shinji, loc. cit., p. 796 (1922); *Toxoptera odorikonis* Matsumura, Jour. Coll. Agri. Sapporo, VII, p. 387 (1917); *Toxoptera leonuri* Takahashi, Aphid. Formosa, pt. I, p. 41 (1921): List Aphid. China (1928).

Host — *Gossypium* sp. and many others.

Collected — June 4, 1934 at Kinshu.

Gener. distr. — Throughout the world.

15. *Aphis nerii* BOYER de FONSCOLOMBE (Kyochikuto-abura)

Orig. descr. — *Aphis nerii* Boyer de Fonscolombe, Ann. Soc. Ent. France, X, p. 179 (1841).

Descr. from Orient — van der Goot, Contr. Fauna Ind. Neerl., I, no. 3, p. 101 (1917); Das, Mem. Ind. Mus., VI, p. 204 (1919); Takahashi. Aphid. Fermosa, pt. 2, 38 (1923); Takahashi, and Okamoto, Ins. Matsum., I, p.

138 (1927); SHINJI, Stud. Aphid., p. 536 (1937).

Host. — *Nerium*, *Asclepias*, etc.

Collected — May 20, 1937 at Kinshu.

Gener. distr. — Throughout the world.

16. *Aphis laburni* KALTENBACH (Mame-abura)

Orig. descr. — KALTENBACH, Planzenlause, p. 85 (1857).

Descr. from Orient — HORI, Hokkaido Agri. Exp. St. Rept., 23, p. 112; NEVSKY, Mon. Aphid. Middle Asia, p. 181 (1929); SHINJI, Stud. Aphid. p. 525 (1937); *Aphis rumicis* MAKI, Agri. Expt. St. Formosa, Bull. 108, p. 36 (1916); *Aphis medicaginis* van der GOOT, Contr. Fauna Ind. Neerl., 1, 3, p. 98 (1917), ESSIG and KUWANA, Proc. Cal. Acad. Sci., 4th ser., VIII. p. 71 (1918); TAKAHASHI, Aphid. Formosa, pt. I, p. 46 (1921).

Hosts: — *Vicia*, *Pissum*, *Trifolium* etc.

Collected — on *Vicia* sp., May 20, 1937 at Kinshu.

Gener, distr. — Cosmopolitan, being found almost all over the world.

17. *Aphis pomi* de GEER (Ringo-abura)

Orig. descr. — *Aphis pomi* de GEER, Mem. des Indes, III, p. 53 (1773).

Descr. from Orient — *Aphis pomi* TAKAHASHI, Aphid. Formosa, pt. I, (1921); HORI, Hokkaido Agri. Expt., St. Rept, no. 23, p. 117 (1927); NEVSKY, Mon. Aphid. Middle Asia, p. 193 (1929); SHINJI, Stud. Aphid., p. 555 (1937); *Aphis kogomecola* MATSUMURA, Jour. Coll. Agri. Sapporo, VII, pt. 6, p, 388 (1917); *Aphis croomiae* SHINJI, Jour. Zool., XXXIV, p. 794 (1922).

Hosts — Apple, pear and many other plants.

Collected — June 10, 1937 on a pear tree at Kinshu.

Gener. distr. — Throughout the world.

18. *Aphis rumicis* LINNÉ (Gishigishi-abura)

Orig. descr. — *Aphis rumicis* LINNÉ, Syst. Nat., Ed. 10, I, p. 451 (1758).

Descr. from Orient — DAS, Mem. Ind. Mus., VI, p. 203 (1918); TAKAHASHI, Aphid. Formosa, pt. I, p. 47 (1921); SHINJI, Stud. Aphid., p. 561 (1937).

Hosts — *Rumex* spp., *Solanum nigrum*.

Collected — June 10, 1936 on *Rumex* at Kinshu.

Gener. distr. — Cosmopolitan, being reported from nearly all parts of the world.

19. *Aphis saliceti* KATLENBACH (Yanagi-abura)

Orig. descr. — *Aphis saliceti* KALTENBACH, Monog., p. 103 (1843).

Descr. from Orient — TAKAHASHI, Aphid. Formosa, pt. 1, p. 47 (1921); OPMANIS, Beitr. Kenntn. Aphid. Lettl., p. 447 (1928); NEVZKY, Mon. Aphid., Middle Asia, p. 200 (1929); SHINJI, Stud. Aphid., p. 568 (1937).

Hosts — *Salix* spp.
Collected — June 9, 1937 outside of the West Gate, Kinshu.
Gener. distr. — Japan, Smatra, N. America, Europe, Manchoukuo.

20. *Aphis neosalici* n. sp. (Niseyanagi-abura)

ALATE VIVIPAROUS FEMALE

Body light green or yellow, individuals of two different colouration being often found congregated at the same nitche. Head much narrower than prothorax, broader than long, black on dorsum and yellow on the ventral side, provided with a few rather short hairs on the dorsum. Eyes dark red; ocelli prominent, with margine reddish. Proboscis reaching almost to the coxal cavity of the hind leg, dusky at the apex, the remaining portion being concolourous whith the body. Antennae 6-articulated, shorter than body, imbricated throughout from III on to the apex of VI and black throughout except the basal one-third part or so of III, I somewhat broader than long, and about twice as broad as II, II a little longer than broad, III almost as long as VI including the flagellate portion, provided with 8～10 circular sensoria arranged almost in a row, IV much shorter than III but a little longer than the next article which has a regular circular sensorium near its apex, flagellated portion of VI about two and half times as long as the basal portion which has a regular circular sensorium of flinged type and a group of smaller ones.

Prothorax dusky in colour but not so black as the head or mesothorax, provided with a pair of prominent lateral papillae. Mesothorax as well as metathorax black. Legs stout, black or at least dusky except the basal portions of femur and tibia. Front tibia is almost as long as antennal article III. Wings subhyalin with veins somewhat dusky, fore wing with its media twice branched, the second branch arising at about the middle of the first and the third at about three-quarters part of the second. Hind wing with both media and cubitus present.

Abdomen plump, yellow or green according to the type of the individual, provided with dusky maculae on the middle as well as lateral portions of the dorsum of each segment. Cornicles much shorter than antennal article III, imbricated and black throughout, not much wider at base than near the apex. Anal plate dusky, rounded, with many long hairs. Cauda subconical, with 3～5 pairs of long hairs, constricted slightly near the middle, dusky throughout.

Measurements in mm:

Length of body . . . 1.90　　Breadth of abdomen . . . 0.78
Length of forewing . 2.30　　Breadth of forewing . . . 0.9
Lengths of antennal articles: I . . 0.7　　II . . 0.06　　III . . 0.48
IV . . 0.40　　V . . 0.3　　VI the base . . 0.2　　Filament . . 0.40
Length of cornicle, 0.42,　　Length of cauda, 0.24.

APTEROUS VIVIPAROUS FEMALE

Body either green or yellow, with a few rather short hairs. Head much narrower than the prothorax, provided with a few hairs, broader than long. Eyes prominent, dark red, with ocular tubercles of the same colour. Proboscis reaching almost to the third coxa, only the tip dusky, the remaining portion being concolourous with the body. Antenna of six articles, shorter than the body, light green or yellow from the first joint to the basal half of the fifth, the remaining parts being dusky to black, imbricated from III on to the tip of VI. Thorax not dusky. Legs rather stout, with rather few hairs, yellowish except the claws and the apical one-eighths part of tibia. Abdomen plump, devoid of black maculae, provided with a paired papillae on each segment, of which those on the seventh are very prominent, being almost as big as those on the prothorax. Cornicles subcylindrical, basal portion no broader than near the apex, imbricated and yellowish throughout. Cauda subconical, with 3〜4 pairs of long hairs, dusky.

Host plant — *Salix* sp.

Collected — June 9, 1937 at the outside of the West Gate, Kinshu.

Notes — This species is allied very much to *Aphis saliceti* KALTENBACH infesting the willow. Chief differences between these two species are as follows:

	Aphis neosaliceti	*Aphis saliceti*
1.	Antennal article III of alate form with 8〜10 sensoria flagellum.	with 6〜8 sensoria.
2.	The base of antennal article VI $2\frac{1}{4}$ times as long as the base.	2 times the base.
3.	In the fore-wing area between m 2 and m 3. smaller.	larger.
4.	Cornicle.	
	(a) shorter than III.	longer than III.
	(b) not much flanged.	decidedly flanged.
5.	Cauda.	
	dusky, with 3〜4 pairs of hairs.	yellowish, with about 5 pairs of hairs.

21. *Brevicoryne brassicae* LINNÉ (Tamana-konafukiabura)

Orig. descr. — *Aphis brassicae* LINNÉ, Syst. Nat., II, no. 732, p. 12 (1758).

Descr. from Orient — *Aphis brassicae* MAKI, Agri. Expt. St. Formosa, Bull., 108, p. 25 (1916); DAS, Mem. Ind. Mus., VI, p. 187 (1918); TAKAHASHI, Aphid. Formosa, pt. I, p. 38 (1921); OPMANIS, Beitr. Kenntn. Aphid. Lettl. p. 455 (1928); MONZEN, Saito Hôon Kai Mon., I, p. 46 (1929); HORI, Hokkaido Agri. Expt. St. Rept., no. 23 p. 121 (1929); NEVSKY, Mon. Aphid. Middle Asia, p. 224 (1929); SHINJI, Stud. Aphid., p. 597 (1937).

Host — *Brassica* spp. Collected — June 10, 1936 at Kinshu.

Gener. distr. — Cosmopolitian, being found all over the world.

22. *Cryptosiphum gallarum* KALTENBACH

Orig. descr. — *Aphis gallarum* KALTENBACH, Verb. Nat. V. Preusse Rhein West, p. 206 (1856).

Descr. from Orient—*Cryptosiphum artemisiae* TAKAHASHI, Aphid. Formosa, pt. 2, p. 43 (1923); List Chin. Aphid. (1928) ; OKAMOTO and TAKAHASHI, Ins., Matsum. I, p. 140 (1927);

Pseudolachnus yomogi SHINJI, Jour. Zool., XXXIV, p. 730 (1922); *Cryptosiphum gallarum* MONZEN, Saito Hôon Kai Mon.,' 1, p. 48 (1929).

Hosts — *Artemisia* spp.

Collected — June 11, 1937 at Kinshu. Labelled " *Oregma?* "

Gen. distr. — Japa, Korea, Manchoukou, Europe.

23. *Cavariella salicicola* MATSUMURA, (Yanagi-futaoabura)

Orig. descr. — *Nipposiphum salicola* MATSUMURA, Journ. Coll. Agri. Tohoku Imp. Univ., VII, no. 6, p. 410 (1917).

Descr. from Orient — *Siphocoryne bicaudata* ESSIG and KUWANA, Proc. Cal. Acad. Sci., VI, 4th ser., p. 64 (1918); *Cavariella bicaudata* TAKAHASHI, Aphid. Formosa, pt. I, p. 36 (1921); OKAMOTO and TAKAHASHI, Ins. Matsum., I, p. 136 (1927); HORI, Hokkaido Agri. Expt. St., Rept., no. 23, p. 149 (1929); *Cavariella salicicola* SHINJI, Stud. Aphid., p. 608 (1937).

Host — *Salix* spp.

Collected—June 4, 1934 at Kinshu.

Gen. distr. — Japan, Korea, Manchoukou.

24. *Toxoptera piricola* MATSUMURA (Nashi-futamataabura)

Orig. descr. — MATSUMURA, Jour. Coll. Agri. Tohoku Imp. Univ., VII. p. 414 (1917).

Descr. from Orient — HORI, Hokkaido Agri. Expt. St., Rept., no. 23, (1929); SHINJI, Stud. Aphid., p. 690 (1937).

Host — Pear (*Pirus sinensis*)

Collected — June 12, 1934 on the pear three near Kinshu.

Gene. distr. — Japan (not yet found in Formosa), Manchoukuo.

25. *Hyalopterus atriplicis* LINNÉ (Akaza-kofukiabura)

Orig. descr. — *Aphis striplicis* LINNÉ, Ent. sue., p. 1000 (1748).

Descr. from Orient — *Brevicoryne chenopdi* DAS, Mem. Ind. Mus., VI, p. 183 (1918); *Hyalopterus chenopodi* TAKAHASHI, Aphid. Form., pt. 3, p. 48 (1924);

Brevicoryne atriplicis, NEVSKY, Mon. Aphid. Middle Asia, p. 222 (1929); *Hyalopterus atriplicis* HORI, Hokkaido Agri. Exp. St. Rept., 23, p. 140 (1929); SHINJI, Stud. Aphid., p. 634 (1937).

Host — *Chenoplodium album.*

Collected — June 10, 1937, the outside of the East Gate, Kinshu.

Gen. distr. — Throughout the world except S. America.

26. *Hyalopterus arundinis* FABRICIUS (Yoshi-futooabura)

Orig. descr. — *Aphis arundinis* FABRICIUS, Ent. Syst., IV, p. 312 (1781).

Descr. from Orient — OKAMOTO and TAKAHASHI, Ins. Matsum., I, p. 140 (1927); HORI, Hokkaido Agri. Expt. St., Rept, no. 23, p. 140 (1929); NEVSKY, Mon. Aphid Middle Asia, p. 214 (1929); SHINJI, Stud. Aphid., p. 629 (1937). TAKAHASHI, List Aphid. China (1928).

Hosts — Pear, cherry, *Phragmites commnis.*

Collected — June 12, 1936, near the East Gate, Kinshu.

Gen. distr. — Found all over the world except S. America.

27. *Rhopalosiphum prunifoliae* FITCH (Mugi-kubireabura)

Orig. descr. — *Aphis prunifoliae* FITCH, 1st. Rept. Nox. and Ben. Ins. New York, p. 122 (1855).

Descr. from Orient — *Rhopalosiphum avenae* TAKAHASHI, Aphid. Formosa, pt. 2, p. 34 (1923); *Rhopalosiphum prunifoliae* HORI. Hokkaido Agri. Expt. St., Rept. no. 23, p. 124 (1929); SHINJI, Stud. Aphid., p. 665 (1937); *Yamataphis paperveris* TAKAHASHI, Aphid. Form., pt. I, 39 (1921); *Toxoptera rufiabdominalis* SASAKI, Inj. Ins. Crops Japan, p. 202 (1899); *Yamataphis rufiabdominalis* MATSUMURA, Jour. Coll. Agri. Tohoku Imp. Univ., p. VII, p. 368 (1917); MATSUMURA, *Yamataphis oryzae* MATSUMURA, ibid., p. 448 (1917).

Hosts — Maize, barley, cherry, plum etc.

Collected — May 22, 1937 at Gaboten near Kinshu.

Gen. distr. — Being cosmopolitan, found all over the world.

SUBTRIBE *CERVAPHIDINA*

28. *Cervaphis quercus* TAKAHASHI (Kashi-edatogeabura)

Orig. descr. — TAKAHASHI, Zool. Jour. Zool., XXX, p. 458 (1918).

Descr. from Orient — TAKAHASHI, Aphid. Formosa, pt. I, p. 69 (1921); TAKAHASHI and OKAMOTO, Ins. Matsum. I, p. 140 (1927); *Diverosiphum kunugii* SHINJI, Jour. Zool., XXXIV, p. 791 (1922).

Host — *Quercus variabilis.*

Collected — June 10, 1935 at Kinshu.

Gen. distr. — Japan, Korea, Formosa, Manchoukuo.

SUBTRIBE *MACROSIPHINA*

29. *Capitophorus braggii* GILLETTE (Gobou-kugikeabura)

Orig. descr. — *Myzus braggii* GILLETTE, Canadian Ent., XL, p. 17 (1908).

Descr. from Orient — TAKAHASHI, Aphid. Formosa, pt. 3, p. 33 (1924); HORI, Hokkaido Agri. Expt. St. Rept., no. 23, p. 82 (1929); SHINJI, Stud. Aphid., p. 777 (1937); *Phorodon galeopsis* MATSUMURA, Trans. Sapporo Nat. Hist. Soc., VII, p. 15 (1918); *Capitophorus arctifoliae* SHINJI, Jour. Zool., XXXVI, p. 359 (1924).

Hosts — Archichoke, *Circum japonicum*, *Elaeagnus* spp.

Collected — June 11, 1836 on *Circium* at the outside of the East Gate.

Gen. distr. — Japan, Formosa, Egypt, Europe, N. America, Manchoukuo.

30. *Capitophorus formosartemisiae* TAKAHASHI (Yomogi-kugikeabura)

Orig. descr. — *Myzus formosartemisiae* TAKAHASHI, Aphid. Formosa, pt. I, p. 25 (1921).

Desc. from Orient — SHINJI, Stud. Aphid., p. 780 (1937).

Host — *Artemisia vulgaris*. Collected — June 11, 937 at Kinshu.

Gen. distr. — Japan, Formosa, Manchoukuo.

31. *Phorodon humuli* SCHRANK (Hop-iboabura)

Orig. descr. — *Aphis humuli* SCHRANK, Fn. Boica., II, 110, 1199 (1801).

Descr. from Orient — *Phorodon humuli* TAKAHASHI, Aphid. Formosa pt. I, p. 27 (1921); OAKAMOTO and TAKAHASHI. Ins. Mats., I, p. 135 (1927); OPMANIS, Act. Univ. Latv., XVIII, p. 25 (1923); HORI, Hokkaido Agri. Expt, St., rept., no, 23, p, 78 (1929); SHINJI, Stud. Aphid., p. 987 (1937).

Hosts — *Humulus japonicus*.

Gen. distr. — Japan, Formosa, Korea, India, Europe.

32. *Macrosiphum gobonis* MATSUMURA (Gobou-higenagaabura)

Orig. descr — Jour. Coll. Agri. Sapporo, VII, p. 395 (1917).

Descr. from Orient — TAKAHASHI, Aphid. Formosa, pt. I, p. 6 (1921); List Aphid. China (1928): SHINJI, Bull. Morioka Coll. Agri. and Forest., XI, p. 66 (1927); OKAMOTO and TAKAHASHI, Ins. Mats., I, p. 130 (1927); HORI, Hokkaido Agri. Expt. St., no. 23, p. 59 (1929); SHINJI, Stud. Aphid., p. 844 (1937).

Hosts — *Aretium lappa*, *Circium* spp.

Collected — May 29, 1936, at Kinshu on *Arctium lappa*.

Gen. Distr. — Japan, Formosa, Korea, Manchoukuo, China.

33. *Macrosiphmu granarium* KIRBY (Mugi-higenagaabura)

Orig. descr. — *Aphis granaria* KIRBY, Trans. Linn. Soc., IV, p. 238 (1798).

Descr. from Orient — Hori, Hokkaido Agri. Expt. St., Rept., no. 23, p 62 (1929); Shinji, Stud. Aphid., p. 851 (1937); *Marcosiphum miscanthi* Takahashi, Aphid. Formosa, Pt. I, p. 8 (1921); *Macrosiphum alopeculi* Takahashi, Aphid. Formosa, pt. I, p. 9 (1921); List Aphid. China (1928).

Hosts — Wheat, barley, *Miscanthus*, etc.

Collected — June 10, 1937 on *Agropyrum semicostatum* at Kinshu.

Gen. distr. — Cosmopolitan, being found all over the world.

34. *Macrosiphum ibarae* MATSUMURA (Ibara-higenagaabura)

Orig. Desc. — Matsumura, Jour. Coll. Agri. Sapporo, VII, p. 397 (1917); Descr. from Orient — Takahashi, Trans. Nat. Hist. Soc. Formosa, XX, p. 320 (1930); Shinji, Kontyû, IX, no. 5, p. 244 (1935); *Macrosiphum rosae* Okamoto and Takahashi, Ins. Mats., I, p. 131 (1927).

Host — *Rosa multiflora*.

Collected — May 30, 1935 by Mr. Kitazawa Antou.

Gen. distr. — Japan, Formosa, Korea, Manchoukuo.

35. *Acyrthosiphon pisi* KALTENBACH (Endou-aminashihegenagaabura)

Orig. descr. — *Aphis pisi* Kaltenbach, Mon. Pflanz., p. 23 (1813).

Descr. from Orient — Nevsky, Mon. Aphid. Middle Asia, p. 86 (1929),; Shinji, Stud. Aphid., p. 721 (1937); *Macrosiphum pisi* van der Goot, Contr. Fauna, Indes. Neerl., I, 3. p. 15 (1917); Das. Mem. Ind. Mus., VI, p. 157 (1918); Takahashi, Aphid. Formosa, pt. I, p. 10 (1921); Opmanis, Beitr. Kenntn. Aphid. Lettl., p. 401 (1928); Hori, Hokkaido Agri. Expt. St., Rept., no. 23, p. 70 (1929).

Host — *Pisum sativa* (pea).

Collected — June 10, 1937 at Kinshu.

Gen. distr. — Found all over the world.

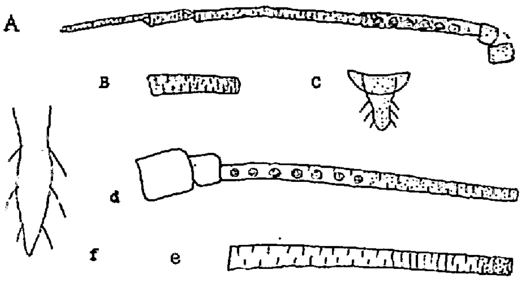
36. *Acyrthosiphon kondoi* n. sp. (Kondo-aminashihigenagaabura)

This species very much resembles to the preceeding one and may well be regarded as a variety of the said species. The following are some of the characters on which the author based created a new species:

A. pisi	*A. kondoi*
Sensoria on III of the alate 5～7, usually 6, and locate within basal half of the joint.	9～20, usually 10～12, and locate nearly on whole length.
Sensoria on III of apterous form 3～5.	Sensoria on III of the apterous are 1～3, usually 2.
Antennae of both forms not dusky at the apicem only, but gradually.	Antennae of both forms, specially, III and IV dusky at their apicem only.
III subequall to VI including the spur.	III much shorter than VI.
Cauda clearly constricted.	Cauda not visiblly constricted.

ALATE VIVIPAROUS FEMALE

Body in the alcoholic specimens light green, with a few short hairs. Head not infuscated, broader than long. Antennae longer than the body, beyond the middle portion of III on to the apex of the flagellum of VI imbricated. I, II and the basal half of III yellowish, the remaining parts infuscated. I much larger than II. II longerthan broad. III almost subequal in length with VI including the spur, provided with 5~7 usually 6 circular sensoria on its basal half. IV slightly longer than V, and much shorter than III, V about 3 times as long as the base of VI, with a subapical circular sensorium, the flagellate portion of VI about 5 times as long as the base. Proboscis rather long, reaching beyond the middle and almost to the acetabullum of the hind coxa, dusky at the apex only, the remaining portion being concolourous with the body. Eyes dark red, with ocular tubercles of the same colour. Oceli prominent, with reddish margin.



Explanation of the figures

A, B, C, ALATE VIVIPAROUSE FEMALE of *Aphis neosalici* n. sp.
d, e, f ALATE VIVIPAROUSE FEMALE of *Acyrthosiphon kondoi* n. sp.
A and d Antennae, B and e Cornicles, C and f Cauda.

Thoracic parts not infuscated. Wings subhyaline with veins brownish. Forewing with media twice branched, the second branch arising at about the middle of the Ist, and the third at about three-fifths part of the second. Stigma yellowish. Hind wing with both media and cubitus present. Legs long, about one-sixths part of the tibia at the apex and tarsi including claws infuscated, the remaining parts concolourous with the body. Abdomen devoid of any black maculae. Cornicles slender, somewhat converging, much beyond the caudal apex, dusky toward or at least at the apex, imbricated throughout the length. Cauda large, subconical, slightly constricted about the middle, provided with about 3 pairs of long hairs, concolourous with the body. Anal plate rounded, concolourous with the body, with many hairs.

Measurement in mm:

Length of the body . . . 1.90 Width of the body . . . 0.80
Length of forewing . . . 3.20 Width of forewing . . . 1.00
Lengths of antennal articles: III, . . . 0.80 IV, . . . 0.70
V, . . 0.55 VI, the base . . 0.20 VI, the spur . . 1.00
Length of cornicle . . . 0.60 Length of cauda 0.34

APTEROUS VIVIPAROUS FEMALE

Body spindle-shaped, with a few hairs, light green. Head broader than long. Frontal tubercles prominent, diverging, not infuscated, with a few short club-shaped hairs. Antennae 6-articulated, very much longer than the body, imbricated beyond the middle of III and slightly dusky beyond the middle of IV, the remaining portion being light yellowish; I almost twice as large as II, II longer than broad, III almost subequal in length with the spur of VI, provided with 3~5, usually 3, circular sensoria on tbe basal portion, V slightly shorter than IV, with a subapical circular sensorium, the base of VI about one-quarter as long as V, the spur of VI nearly 5 times as long as the base. Eyes dark red, with ocular tubercle of the same colour. Proboscis reaching almost to the third coxal cavity, dusky only at the tip.

Thorax and abdomen light green, without black maculae. Legs long, with rather a few short hairs, apical part of tibia and tarsi including the claws infuscate, the remaining parts concolourous with the body. Cornicles about as long as, or a little longer than, antennal atitcle III, about one and a half times as wide at the basal part as at the apex, imbricated throughout, apical one-fifth part or so slightly dusky. Cauda subconical, about half as long as ths cornicle, very slightly, constricted about the middle, provided with about 3 pairs of long hairs; concolourous with the body. Anal plate rounded, concolourous with the body, provided with many long hairs.

Measurement in mm — Length of the body, 1.9; width of the body 1.00; Length of cornicle, 0.8,; length of cauda, 0.5; Lengths of antennal articles: III . . 0.8 IV . . 0.7 V . . 0.57 VI, the base . . 0.16 VI, the spur . . 0.8

Host — Alfalfa.

Collected — June I, 1937 at Kinshu.

37. *Macrosiphoniella sanborni* GILLETTE (Kiku-himehigenagaabura)

Orig. descr. — *Macrosiphum sanborni* GILLETTE, Can. Ent., XL, p. 65 (1908).

Descr. from Orient — van der GOOT, Contr. Fauna Indes. Neerl., I, 3, p. 36 (1917); TAKAHASHI, Aphid Formosa, Pt. I, p. 16 (1921); HORI, Hokkaido Agri. Expt. St., Rept., no. 23, p. 75 (1921); SHINJI, Stud. Aphid., p. 804 (1937); *Macrosiphum chrysanthemi* MATSUMURA, Jour. Coll. Agri. Sapporo, VII, p. 398 (1918); *Macrosiphoniella chrysanthemi* NEVSKY, Mon. Aphid. Middle Asia, p. 106 (1929); *Macrosiphum nishigaharae* ESSIG and KUWANA, Proc. Cal. Acad. Sci., 4th ser., VIII, p. 50 (1918), TAKAHASHI, List Aphid.China (1928).

Host — *Crysanthemum sinense.*

Collected — May 29, 1937 at Kinshu.

Gen. distr. — Cosmopolitan, being found almost all over the world.

38. *Macrosiphoniella yomogifoliae* SHINJI (Ao-himehigenagaabura)

Orig. descr. — *Macrosiphum yomogifoliae* SHINJI, Jour. Zool., XXXIV, p.

788 (1922).

Descr. from Orient — *Macrophoniella yomogifoliae* TAKAHASHI, Aphid. Formosa, VI, p. 61 (1931); SHINJI, Stud. Aphid., p. 810 (1937).

Host — *Artemisia vulgaris.*

Collected — June 11, 1937 at Kinshu on *Artemisia.*

Gen. distr. — Japan Formosa, China, Manchoukuo.

39. *Myzus persicae* SULZER (Momo-kobuabura)

Orig. descr. — *Aphis persicae* SULZER, Abgek. Gesch. Ins., p. 105 (1776).

Descr. from Orient — *Myzus persicae* TAKAHASHI, Aphid. Formosa, pt. I, p. 19 (1921); DAS, Mem. Ind. Mus., VI, p. 166 (1918); MONZEN, Saito Hôon Kai Mon., 1, p. 68 (1929); HORI, Hokkaido Agri. Expt. St., Rept., no. 23, p. 99 (1929); SHINJI, Stud., Aphid., p. 959 (1937); *Rhopalosiphum dianthi* OPMANIS, Beitr. Kenntn. Aphid. Lettl., p. 412 (1928); TAKAHASHI, List Aphid. China (1928).

Host — *Prunus* spp., *Dianthi,* etc.

Collected — June 11, 1937 and many other times on *Brassica, Prunus, Nicotiana,* etc.

Gen. distr. — All over the world except S. America.

40. *Myzus malisactus* MATSUMURA (Ringo-kobuabura)

Orig. descr. — MATSUMURA, Trans. Sapporo Nat. Hist. Soc., VII, p. 16 (1918). Descr. from Orient — TAKAHASHI, Aphid. Formosa, pt. 6, p. 68 (1931); List Aphid. China (1928). SHINJI, Stud., Aphid., p. 939 (1937).

Host — *Pirus marus.* Collected — June 8, 1937 at Kinshu.

Gen. Distr. — Japan, Formosa, China, Manchoukuo.

41. *Phorodon momonis* MATSUMURA (Sakura-iboabura)

Orig. descr.—*Myzus momonis* MATSUMURA, Journ. Coll. Agri. Sapporo, VII, p. 420 (1917).

Descr. from Orient — SHINJI, Stud. Aphid. p. 1002 (1937); *Aphis spinosula* ESSIG and KUWANA, Proc. Cal. Acad. Sci., 4th ser., VIII, p. 77 (1918); *Myzus sakurae* HORI, Hokkaido Agri. Expt., Rept., no. 23, p. 105 (1929); *Myzus higansakurae* MONZEN, Saito Hôon Kai Mon., I, p. 59 (1929).

Hosts — *Prunus persia, Prunus* spp.

Collected — July 2, 1937 at the outside of the East Gate.

Gen. Distr. — Japan, Formosa, China, Manchoukuo.

SUBFAMILY ERIOSOMATINAE

TRIBE *ERIOSOMATINI*

42. *Eriosoma lanigerum* HAUSMANN (Ringo-mentyu)

Orig. descr. — *Aphis lanigera* HAUSMANN, Mag. Ins. Karl. Illiger., I, p. 426

(1802).

Descr. from Orient — Monzen, Saito Hôon Kai Mon., I, p. 20 (1929); Hori, Hokkaido Agri. Exp. St., Rept., no. 23, p. 160 (1929); Shinji, Stud. Aphid., p. 1059 (1937).

Hosts — Apple, hawthorn, *Purthiaca villosa.*

Collected — May 11, 1936 at Kinshu.

Gen. distr. — All over the world except S. America. In Japan, it has not yet been reported from Formosa.

43. *Tetraneura ulmifoliae* BAKER (Nire-yosugimentyu)

Orig. descr. — *Aphis ulmi* Linné, Syst. Nat., ed X, p. 451 (1758).

Descr. from Orient — *Tetraneura yezoensis* Matsumura, Coll. Essay Nawa, p. 75 (1917); Monzen, Saito Hôon Kai Mon., I, p. 25 (1927); *Tetraneura japonica* Matsumura, Proc. Russ. Acad. Sci., p. 40 (1923).

Host — *Ulmus japonica.*

Collected — June 20, 1936 at Kinshu.

Gen. distr. — All over the world except Africa and S. America.

44. *Pemphigus dorocola* MATSUMURA (Doro-tamawatamushi)

Orig. descr. — Matsumura, Coll. Essays Nawa, p. 84 (1917).

Desc. from Orient — Monzen, Saito Hôon Kai Mon., I, p. 34 (1929); Shinji, Stud. Aphid., p. 1073 (1937).

Host — *Populus maximowiczii.*

Collected — June 13, 1937 at Kinshu.

Gen. distr. — Japan, Manchoukuo.

45. *Pemphigus niishimae* MATSUMURA (Doroha-watamushi)

Orig. descr. — Coll. Essays Nawa, p. 85 (1917).

Descr. from Orient — Monzen, Saito Hôon Kai Mon., I, p. 38 (1929); Shinji, Stud. Aphid., p. 1075 (1937); *Pemphigus matsumurai* Monzen, Saito Hôon Kai Mon. I, p. 32 (1929).

Host — *Populus* sp.

Collected — June 16, 1937 at Kinshu.

Gen. distr. — Japan, Manchoukuo.

46. *Prociphilus kuwanai* MONZEN (Nashi-hamakiwatamushi)

Orig. descr. — *P. pyri* Essig and Kuwana, Proc. Cal. Acad. Sci., 4th ser., pt. 7, p. 106 (1918); *P. kuwanai* Monzen, Alumn. Ass. Morioka Coll. Agri. and Forest., VI, Rep.-(1927).

Descr. from Orient — Shinji, Stud. Aphid., p. 1085 (1937).

Host — *Pirus sinense.*

Collected — Sept. 10, 1936 at Kinshu.

Gen. Distr. — Japan, Manchoukuo.